1. INTRODUCTION

When computers first began to appear in schools, their use was mainly confined to electives or to subjects such as Computer Studies, Computer Awareness, or Keyboarding as typewriters began to be phased out. Computers in schools today are no longer seen as necessarily a specialized subject, but rather the expectation is that computers will be used by all teachers and children across all of the Key Learning Areas (KLAs). The emphasis has moved from learning about computers to learning with computers. The focus has moved from the computer per se to pedagogical strategies using computers that enhance the teaching and learning process.

As a result of this changed emphasis, teacher education students need to have well developed information and communications technology (ICT) literacy skills that will enable them to effectively locate, retrieve, evaluate, manipulate, save, and present data in a meaningful form (Smyth, 1997). ICT is more than just another teaching tool. It has the potential to significantly improve the quality of children’s education as well as supporting teachers. It is able to be used by teachers to reduce their administration load and assist in their continuing professional training and development (Leask & Meadows, 2000). Increasingly, teachers need to be able to use technology to effectively communicate, collaborate, and support critical thinking and problem-solving (Rosenthal & Poftak, 1999).

The final report of the review of teacher education in New South Wales (NSW) (Ramsey, 2000) included an examination of the issue of integrating ICT into pedagogy. The inquiry found that generally the use of ICT was not being sufficiently exploited during initial teacher education. The review reported that the focus both in universities and schools must be on quality teaching, and it listed ways in which ICT can contribute to better learning outcomes for children.

A national survey of ICT skills and attitudes of teacher education students was conducted in Scotland in the session 1996-1997 (Simpson, Payne, Munro, & Lynch, 1998). This survey found that the students had very positive attitudes and...
enthusiasm for ICT use in education. Although these students expected ICT to permeate through all of their professional work, the survey found that their ICT experiences during their teacher education course fell considerably short of their expectations. Many of the students felt that their course experiences did not enable them to understand ways in which the pedagogical potential and capabilities of technology could be realized in the classroom. In fact, the authors even suggested that the variety of types of ICT equipment currently in use in teacher education and schools was also a contributing factor.

In the United States, the Milken Exchange on Education Technology conducted a survey of more than 400 teacher education institutions to determine the status of technology training (Basinger, 1999; Wood, 2000). The results found that teacher training institutions generally did not adequately prepare future teachers to make effectively use of technology. It was found that most faculty staff did not model the use of technology in their teaching and, although technology was available in the student’s field experience sites, it was not routinely used by teachers.

On a more positive note, the National Council for Accreditation of Teacher Education (2001) in the United States have reported on a number of case illustrations of ICT being used effectively with teacher education students. Each case provides examples of a wide range of ICT usage with student teachers both in schools and universities. Smithey and Hough (1999) found that many of the teacher education students at their College who were initially resistant to using ICT in classrooms became their strongest supporters after they had graduated. These authors believed that such a dramatic turn around was partly the result of providing the students with opportunities to simultaneously practice using technology in the classroom while learning to design multimedia units in a supportive university environment.

Because the use of ICT by teachers is so important for children’s future lives in the new millennium, it is felt that an investigation of current ICT usage by initial primary teacher education students is warranted. Most of the recent studies which have examined pre-service teacher’s usage and attitudes towards ICT have focused on their university contexts; so it may therefore be useful to discover the extent of usage by initial student teachers during their practicum. This will help ascertain whether the ICT knowledge, skills, and attitudes taught at the university are transferred into practical application in primary school classrooms. Before describing the methods used to survey the initial student teachers, it is first necessary to outline their current exposure to ICT in their four year Bachelor of Education (BEd) primary course. The research questions generated to guide the study will then be stated before presenting some of the data obtained from the survey. These findings will then be discussed before providing some of the implications arising from the findings for teacher educators.

2. SOME SUBJECTS THAT INVOLVE ELEMENTS OF ICT

All teacher education students enrolling in the BEd primary course at Charles Sturt University – Wagga Wagga are required to pass four science and technology